

In the Specification:

[0022] The neutron detector is preferably small and sufficiently sufficiently rugged to withstand use in a portable survey instrument. In the preferred embodiment, the neutron detector comprises a 1 inch (in.) or 2.54 centimeter (cm) diameter, 6 atmosphere He-3 detector. The neutron detector system is also preferably responsive to a wide range of neutron energies. Finally, the neutron detector system is relatively sensitive to total neutron flux.